

REMARKS/ARGUMENTS

The present application contains claims 6 and 15-33. Claims 15, 16, 23, 24 and 26 have been amended. Claims 15 and 16 have been amended so as to be in conformity with the wording in other claims, such as claims 18 and 21, for example. Claims 23 and 24 have been amended responsive to the examiner's recommendation to amend these claims to depend from claim 21. Claim 26 has been amended to add clarity to the claim. No new matter has been added.

It is noted that the last official action is a non-final action and the examiner has set a three-month response period set to expire January 19, 2006. This amendment is accompanied by a request for a one-month extension of time, together with the appropriate fee. It is submitted that this amendment has been timely filed.

Making further reference to the Office Action Summary, it is noted that claims 6 and 15-33 have been rejected. Applicants respectfully traverse this rejection as set forth below.

It is noted that the drawings filed February 5, 2005 have been accepted. It is noted that the claims for foreign priority have been acknowledged and that the certified priority documents have been received by the Patent Office.

Making reference to the detailed action, the objection to claims 23 and 24 are noted. As has been set forth above, claims 23 and 24 have been amended to depend from claim 21 and it is submitted that these objections should be withdrawn.

Claims 6, 15-17, 25-27, 32 have been rejected under 35 USC section 103(a) as unpatentable over Kondo, Pat '364 in view of Anderson Pat '255. This rejection is respectfully traversed

The Kondo patent, making reference to Figure 6, teaches an arrangement in which a sweep-out frequency is developed by a clock signal generating means 26, shown in Figure 5, which is capable of developing a variable frequency. Once the shutter opening signal $\Phi SS1$ is generated and during a pre-determined time delay required for the mechanical shutter to start opening, the clock generating means 26 generates a frequency $f1$ which is described as a "low frequency much lower than the clock frequency $f0$," as is recited at lines 62-68 in column 7 of Patent '364. When the shutter is substantially fully opened, at signal $\Phi SS2$, and during a flash operation, the clock frequency is changed to the frequency $f0$ which, since $f1$ is described as much lower than the clock frequency $f0$, clearly the clock frequency $f0$ is much greater than the lower frequency $f1$. Referring to Fig. 6, it should be noted that the frequency ($f0$) of the clock 26 remains constant during the period between $\Phi SS2$ and $\Phi SS3$, even though the flash is operated during this period. Kondo '364 clearly teaches away from the objective of the present invention.

The objective of Kondo '364 is to prevent image deterioration due to the dark current and white point flaws to provide an image having a high picture quality. There is neither teaching nor remote suggestion or any concern by Kondo '364 to reduce a sweep frequency as a function of battery power.

The Examiner admits that Kondo '364 does not "explicitly" disclose that an operating condition judging means is provided to judge a supply voltage level and that the control means lowers the sweep out frequency and the sweep out means when it is detected that a supply voltage level is lower than a pre-determined voltage, and relies upon Anderson '255 which discloses a voltage sensor 76 shown in Figure 3, and a power supply 17 shown in Figures 1 and 3, wherein voltage sensor

76 measures the voltage supplied by the power source and, if the voltage supplied is below a pre-determined level, the camera application unit shuts the power supply to the flash unit off to manage the power consumption in the camera to avoid a condition where the battery is unable to provide a sufficient voltage for the camera's minimal operating needs while maximizing the battery's useful life. This operation teaches away from Kondo '364 since Anderson '255 shuts off the power supply and fails to teach any means for enabling the power supply to be maintained in the on state in order to allow camera operation to continue while operating the clock generator of Kondo '364 at a lower sweep out frequency, due to reduction of the battery level below a given threshold, as is taught by the present application.

It is submitted that Anderson '255 fails to teach or even remotely suggest any manner in which its teachings may be combined with Kondo to achieve the objectives of the present invention. Alternatively, there is no suggestion in Kondo '364 as to how the teachings of Anderson '255 may be utilized to accomplish these results.

It is to be noted that the present invention **prevents** system interruption by decreasing the sweep-out frequency of the image pick-up device when the battery

source voltage is lower than a predetermined voltage.

To the contrary, Kondo '364 pays careful attention to the strobe lighting period (high blooming), as well as the periods when the flash is not operating (low blooming or no blooming) and increases the clock frequency applied to the anti-blooming gate in the strobe lighting period when high blooming is increased as compared to the frequency to be applied in periods of low blooming or no blooming in order to prevent blooming caused by the reflection light from the strobe. Kondo patent '364 fails to disclose or suggest the technique of decreasing the sweep-out frequency when the battery source voltage level is lower than a predetermined voltage. The output level of the battery source is of no concern to Kondo Pat '364 since the output level of the battery is not a function of the amount

of blooming.

It is important to note that Kondo '364 **increases** the sweep out frequency when high blooming is present since the objective of preventing blooming is paramount in Kondo '364 and Kondo' 364 does not take into consideration the voltage level of the power source (battery). Clearly, the manner of operation of the Kondo '364 image sensing apparatus is directly contrary to that of the present invention since, to prevent interruption of flash operation in the presence of a reduced power output is of paramount importance in accordance with the teachings of the present invention, and a sweep out frequency is reduced when the battery source output level reduces below a given threshold.

The only teaching provided by Anderson '255 is to shut off the power supply to the flash unit. There is neither teaching nor remote suggestion of utilization of the voltage sensor to adjust frequency nor is there any teaching of the voltage sensor utilized to adjust the operating frequency of a sweep out signal. The objective of Anderson '255 is to turn a component of the camera off. Turning off the Kondo '364 flash in accordance with the teachings of Anderson '255 does not teach the subject matter of the claims of the present invention. There is no teaching of reducing an operating frequency of a sweep out signal when a voltage level of a battery is below a particular level in order enable a the flash operation to be performed.

It is submitted the only proper combination to be made between Kondo et al. '364 in combination with Anderson '255 is to prevent operation of a flash unit when a battery level is low. Even this combination is considered to be improper since the objective of Kondo '364 is to significantly increase the frequency of the sweep out signal when the flash unit is being operated to reduce or eliminate the effect of blooming and for the above reasons it is submitted that the combination of Anderson '255 with Kondo '364 is improper and should be withdrawn.

Regarding the rejection of claims 18-24 and 33 and claims 28-31 under 35 U.S.C. §103(a) as unpatentable over Kondo '364, Iida '023 and Anderson '255 it is

submitted that these claims patentably distinguish over Kondo '364 and Anderson '255 for the same reasons set forth above with regard to claims 6, 15-17, 25-27 and 32.

Iida '023 teaches a camera in which a voltage check is performed when a release button, moveable to a half depressed position and a fully depressed position, checks the battery of the camera when the release button is half depressed to determine if the camera is capable to perform other functions with the measured power of the battery, such functions including charging the flash and distance measurement. Again, there is neither teaching nor remote suggestion of the use of a voltage check operation to control the frequency of a sweep out signal based on the level of the power source. The only thing which Iida '023 contributes to the combination is the ability to perform a voltage check of the power supply responsive to operation of the shutter button.

It is interesting to note at page 17 of the Detailed Action that the Examiner takes "official notice" that it is well known to use a sweep out signal of a lower frequency for a lower illuminated scene and a sweep out signal of a higher frequency for a highly illuminated scene. It should be noted that these teachings are contrary to the teachings of the present invention wherein, regardless of whether the image being photographed is in a low illumination status or a high illumination status, the overriding objective of the present invention is that the frequency of the sweep out signal is adjusted based on a determination of the level of the battery supplying power to the device.

In view of the foregoing, it is submitted that claims 6 and 15-33 are patentable over Kondo '364 and Anderson '255 as well as the combination of Kondo '364, Anderson '255 and Iida '023 and reconsideration and allowance of these claims are respectfully solicited.

Conclusion


If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing remarks, Applicants respectfully submit that the present application, including claims 6 and 15-33, is in condition for allowance and a notice to that effect is respectfully requested.

Favorable action is awaited.

Respectfully submitted,

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Enclosures